

REMARKS/ARGUMENTS

A. Amendment to the Claims

Claims 1-4, 45-55, 60-67, 75, and 77-78 were under examination. Claims 1 and 60 are amended. Claims 55 and 75 are canceled. New claims 79 and 80 are added. Claims 1-4, 45-54, 60-67, and 77-80 remain under examination

Independent claims 1 and 60 are further amended to provide that the change tool has a blade portion having the upper edge that intersects each of the retainer cavities when the change tool is inserted within the change tool slot, and that the upper edge (claim 1) / linear upper edge (claim 60) of the change tool raises all of the plurality of change balls when disposed in their respective retainer cavities to a position where, upon subsequent rotation of the plug away from the second rotated position, each raised change ball is removed from the retainer cavity and isolated in the corresponding driver chamber. Support for the amendments are found in paragraphs [0141] and [0191], and in Figures 11A and 11B.

New claims 79 and 80 depend from claims 1 and 60, respectively, and provide that the number of the plurality of drivers and the plurality of tumblers is six and more. Support is found in Figures 2A and 2B, which illustrate a lock with 6 pairs of drivers and tumblers, and at the last sentence of para. [0134] which states that the lock can have more or less than the number of drivers and tumblers as illustrated in Figures 2A and 2B.

Applicant believes that no new matter has been added by way of the amendments to the claims, and that no claim fees are due.

C. Rejection of Claims 1-4, 45-52, 60, 63-65, 77-80 under 35 USC 103(a) over Monahan (4,386,002) in view of EP 0918124.

(1) The rejection:

With respect to remaining Claims 1-4, 45-54, 60-67, and 77-80, the final rejection of the office action dated December 12, 2007 stated “Monahan teaches a lock including a housing 30, a plug 34, springs 49, drivers 44, pins 45, plural keys regarded user keys of a set, a programming key and a master key with different (raised and lowered) contour edges received in the keyway passage 62, a change tool slot 52, a change tool 51, change members 47 moved by the change

tool as seen in figure 14 after the plug is rotated. Monahan also teaches a shim defined by the topmost wafer 47 as seen in figure 12. With respect to paragraph “e)” of claim 6 [*now canceled*], for example, the lock of Monahan is capable of being reconfigured solely in response to a key, by removing the change tool such as in the figure 11 condition and then inserting a key, rotating the key, and allowing a change member 47 to fall within the retainer cavity. As seen in figure 17, the EP (124) reference teaches using a ball (e) as a change member with a retainer cavity (f). It would have been obvious to substitute a ball in place of, or in addition to, the plural change member discs 47 of Monahan, in view of the teaching of the EP (124) reference, the motivation being to prevent jamming between the topmost disc 47 in the retainer cavity and the shear line in the figures 13 and 14 position of Monahan.”

In response to the rejection, Applicant requested reconsideration of the rejection in view of the amendments made in a response dated February 11, 2008. The Examiner’s Advisory Action maintained the rejection of the claims, noting that:

- 1) with respect to “any” and “all”, the independent claims do not positively set forth that a change ball is located in all retainer cavities, and
- 2) that the numerous change tools of the Monahan reference teach using a biasing surface to remove a member in whatever retainer cavities are to be chosen to receive a change member.

The Examiner also extended the rejection to claims 77 and 78 that were newly added in Applicant’s Febr. 11, 2008 response. Applicants anticipate that the rejection would likewise apply to new claims 79 and 80.

(2) Telephone interview:

Applicant wishes to express his sincere thanks to the Examiner for the time and consideration during the telephone interview with the Applicant’s undersigning attorney on March 11, 2008. In the interview, Applicant discussed with the Examiner the Advisor Action and potential further amendment and arguments that would be considered by the Examiner in this subsequent response.

(3) Reconsideration of Allowance of the Claims:

Applicant requests reconsideration of the rejection in view of the further amendments made.

(i) Applicant believes that the further-amended claimed invention includes at least one feature that is not disclosed or suggested in either reference or a combination thereof. The claims provide for a change tool having an upper edge that intersects each of the plurality of retainer cavities when the change tool is inserted within the change tool slot, wherein the upper edge of the change tool raises all of the plurality of change balls when they are disposed in their respective retainer cavity to a position where, upon subsequent rotation of the plug away from the second rotated position, each raised change ball is removed from the retainer cavity and isolated in the corresponding driver chamber. Monahan illustrates (e.g., in Figures 6, 7, 15, 16) set blades which have numerous positions along its length where, when the set blade is inserted and disposed within the slot 52, the plurality of change members (master pins) 47 remain in the blind holes 50, below the shear line (for example, two master pins are shown disposed on the set blade in positions B-F of Figure 6).

The Monahan disclosure teaches that the user needs an equal number of uniquely-bitted set blades, one each, for the number of supported uniquely-bitted user keys for the lock. However, none of the set blades illustrated or listed in the chart(s) discloses a set blade that can raise all of the master pins when they are disposed in their respective blind holes. Chart 1 of Monahan shows that most of the blades have a designation "0" in most of the positions, indicating that the majority of master pins are supported on top of the set blade within the blind hole.

Therefore, even if, for the sake of argument, the master pins of Monahan are replaced with the balls of EP '124, and the smaller-diametered blind holes of EP'124 are used instead of the equally-sized blind holes of Monahan, there is no disclosure or suggestion of a single tool with a blade that raises all of the master pins out of the blind holes when positioned within the slot; rather, Monahan expressly teaches that a uniquely-bitted set blade is required for each corresponding and unique user key.

(ii) Claims 48 (dependent from claim 1) and claim 60 also provide that the blade portion of the change tool has a linear upper edge. None of the set blades of Monahan are illustrated with a linear upper edge that intersects all of the blind holes when the set blade is disposed in the slot, and all of the set blades in Monahan are shown with bitted portions to retain at least one, and typically a large number of, master pins within the several blind holes.

E. Rejection of Claims 61 and 62 under 35 USC 103(a) over Monahan (4,386,002) in view of EP 0918124, and further in view of additional teachings of EP 0918124.

Regarding remaining claims 61 and 62, and without acquiescing to the characterization of the Monahan and EP'124 references made in the rejection, Applicant requests reconsideration on the basis of the amendments to claims 1 and 60.

F. Rejection of Claims 53, 54, 66 and 67 under 35 USC 103(a) over Monahan (4,386,002) in view of EP 0918124, and further in view of additional teachings of Monahan and Smith.

The Examiner states "Monahan also teaches master shims defined by the topmost wafer 47 as seen in fig. 12. In fig. 94, Smith teaches a shim 583 of a first diameter and a retainer cavity 545 of a second, smaller diameter. It would have been obvious to use a larger diameter shim with a retainer cavity of Monahan, in view of the teaching of Smith, the motivation being to control how many change members may enter a change cavity, in reprogramming a lock."

Without acquiescing to the characterization of the Monahan, EP'124 and Smith references made in the rejection, Applicant requests reconsideration on the basis of the amendments to claims 1 and 60.

Conclusion

Applicant believes a full and complete response to the Action has been made and that the amendments place all of the claims into condition of allowance. Applicant requests entry of the amendments, even if the rejections are maintained, so as to better place the claims into condition for appeal, if needed.

Respectfully submitted,

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